OUT 69455

SECRET

RR RHCOAAA RUCRJCS RUEFHQ RUHHABA RUKLAAA RUVRRIA 1970 MAR 3 22 19Z
DE RUEADJU 0005 0622150
ZNY SSSSS
R 032117Z MAR 70
FM NPIC WASHDC
TO RHCOAAA/SAC OFFUITT AFB, OMAHA NEBRASKA
RHCOAAA/544TH ARTW, OFFUITT AFB, OMAHA NEBRASKA
RUHHABA/548TH RTG, HICKAM AFB, HAWAII
RUKLAAA/4800TH RTG, LANGLEY AFB, VIRGINIA
RUCRJCS/DIAXX-2
RUEFHQA/HQ USAF
RUVRRIA/WARNER ROBINS AFB, GEORGIA
BT
S E C R E T CITE NPIC 8095
WARNER ROBINS AFB FOR WRAMA/WRNWA; HQ USAF FOR AFIGOS, AFXOTR, AFNICAD, AFRDRM; SAC FOR DIRI, DOSR, DISD
SUBJECT: EVALUATION OF GIANT NAIL MISSIONS T-145, T-146, T-148, T-151, T-152, T-153, T-154 AND T-155.

1. IMAGE QUALITY: THE OVERALL IMAGE QUALITY OF THESE MISSIONS WITH THE EXCEPTION OF MSN T-152 IS FAIR WITH INSTANCES OF GOOD IMAGERY. THE MAJOR DEGRADING FACTOR APPEARS TO BE IMAGE MOTION CAUSED BY VEHICLE VIBRATION. IN ADDITION, INSTANCES OF SCAN DIRECTION IMAGE SMEAR WERE NOTED. THESE DEGRADATIONS ARE MOST APPARENT AT MAGNIFICATIONS OF 25X AND ABOVE. THE INTERPRETATION SUITABILITY OF THESE

DISTRIBUTION	
CY	OFFICE
1/2	FILE
	CABLE SEC.
	PP&B/RD
	SECUR
34	TSSG
	PSG/OC
	RRD
	REPRO
	AID
	IEG
	IEG/OD
	SCIEN
	WEST
	EAST
	M&S
	IEG/PHD
	IAS
	DIA-XX4
	SPAD
	DIA-AP
	25X1

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MISSIONS WITH THE EXCEPTION OF T-152 AND T-155 IS GOOD. THE INTERPRETATION SUITABILITY OF T-155 IS FAIR, DUE TO THE LOW CONTRAST AND THIN DENSITY OF THE ORIGINAL NEGATIVE (SEE PARA 6B). THE IMAGE QUALITY OF T-152 IS GOOD THROUGHOUT THE MISSION WITH INSTANCES OF EXCELLENT IMAGERY. MAGNIFICATIONS OF UP TO 50X ARE POSSIBLE. THE INTERPRETATIVE SUITABILITY IS GOOD TO EXCELLENT. IT SHOULD BE NOTED THAT MISSION T-152 USED A WRATTEN 23A FILTER. ALL OTHER MISSIONS USED A WRATTEN 15.

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2. MISSION DATA SUMMARY

MISSION	DATE FLOWN	CAMERA NO	A/C NO	T/O TIME Z	C/O TIME Z
T-145	7 DEC 69	8012	348	0100	0303
T-147	12 DEC 69	8012	348	0340	0547
T-148	13 DEC 69	8010	348	0215	0414
T-151	31 DEC 69	8010	348	0424	0627
T-152	6 JAN 70	8012	348	0005	0250
T-153	9 JAN 70	8010	348	2340	0139
T-154	15 JAN 70	8012	334	0352	0552
T-155	18 JAN 70	8012	334	0130	0331

MISSION	CHEM/GAMMA	PROCESS FAC/RTG	WRATTEN FILTER	CAMERA MALFUNCTION	TITLED PROPERLY
T-145	UNK	UNK	15	NO	YES

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T-147	MX578/2.57	548TH	15	YES	NO
T-148	MX578/2.50	548TH	15	YES	NO
T0151	MX578/2.58	548TH	15	YES	NO
T-152	MX578/2.50	548TH	23A	NO	YES
T-153	MX578/2.44	548TH	15	YES	NO
T-154	MX578/2.49	548TH	15	NO	YES
T-155	G-4 /1.44	12RTS	15	NO	YES

SECRET

MISSION	TOTAL FRAMES	PERCENT CLOUD COVER	IMAGE QUALITY	PI INTERP.
T-145	1315	10	FAIR	GOOD
T-147	912	10	FAIR	GOOD
T-148	916	35	FAIR	GOOD
T-151	1306	15	FAIR	GOOD
T-152	1824	10	GOOD	EXCELLENT
T-153	980	85	FAIR	GOOD
T-154	650	65	FAIR	GOOD
T-155	857	40	FAIR	FAIR

ALL MISSIONS USED:

A. FILM TYPE 3404

B. EXPOSURE - AUTOMATIC EXPOSURE CONTROL

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C. STEREO COVERAGE MODE.

3. ORIGINAL NEGATIVE:

A. EXPOSURE: ALL MISSIONS, EXCEPT T-155 WERE SLIGHTLY OVEREXPOSED BY APPROXIMATELY 0.1 LOG EXPOSURE.

B. DENSITY AND CONTRAST: ON ALL MISSIONS EXCEPT T-155 THE DENSITY IS SLIGHTLY HEAVY AND THE CONTRAST IS HIGH. SEE PARA 6B FOR MISSION T-155 COMMENTS.

C. IMAGED DEGRADATIONS: A CAMERA MALFUNCTION OCCURRED AT LEAST TWENTY-FIVE TIMES ON MISSIONS T-147, T-148, T-151 AND T-153. EACH TIME THE MALFUNCTION OCCURS TWO FRAMES ARE AFFECTED. THE IMAGE QUALITY OF THESE FRAMES IS NOT DEGRADED EXCEPT AT THE ENDS OF THE FRAME WHERE OVERLAPPING MAY OCCUR. A DETAILED DESCRIPTION OF THIS MALFUNCTION IS REPORTED IN THE EVALUATION OF MISSION T-138, NPIC MESSAGE 7552, 8 DEC 69.

D. LIGHT LEAKS:

(1) MINOR PLUS DENSITY FOG PATTERNS, TYPICAL OF THIS SYSTEM, ARE PRESENT ON ALL MISSIONS. THESE FOG PATTERNS DO NOT AFFECT THE OVERALL QUALITY OF THE MISSIONS.

(2) A LIGHT LEAK AROUND A SPOOL FLANGE CAUSED A BLOCK OF FOG FOR APPROXIMATELY TEN WRAPS ON MISSION T-154.

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(3) NUMEROUS PROCESSING STAINS WERE NOTED ON MISSION T-145.

(4) CAMERA START-UP AND SHUT-DOWN ASSOCIATED FOG PATTERNS WERE NOTED ON EACH MISSION.

4. PHYSICAL DEGRADATIONS: NUMEROUS SCRATCHES AND HANDLING MARKS ARE APPARENT ON ALL MISSIONS. ULTRASONIC SPLICES ARE LOCATED ON:

MISSION	FRAME
T-148	486
T-151	674
T-152	432
T-153	718
T-155	262

5. DATA RECORDING EQUIPMENT: FUNCTIONED PROPERLY ON ALL MISSIONS EXCEPT DURING THE CAMERA MALFUNCTION. THE WRITE-IN CARD ON ALL MISSIONS IS OVEREXPOSED AND IS DIFFICULT TO READ.

6. OTHER:
A. THE FILM WAS PROPERLY TITLED EXCEPT ON THOSE MISSIONS WHERE A CAMERA MALFUNCTION OCCURRED. AFTER THE INITIAL MALFUNCTION ON EACH MISSION, THE REMAINDER OF THE MISSION IS NOT TITLED IN ACCORDANCE WITH ESTABLISHED TITLING PROCEDURES.

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THE MALFUNCTION IS NOT OF A NATURE THAT WOULD WARRANT THE DISCONTINUATION OF PROPER TITLING PROCEDURES.
B. MISSION T-155 WAS PROCESSED BY THE 12TH RTS IN G-4 CHEMISTRY, A LOW GAMMA DEVELOPER. THE MATERIAL WAS UNDEREXPOSED FOR THIS FILM/DEVELOPER COMBINATION, AS WAS EVIDENCED BY THE 0.20 D/MIN AND 0.50 D/MAX AND THE SLOWER EFFECTIVE FILM SPEED, AEI, OF 2.34. THE DENISTY AND CONTRAST WERE BOTH VERY LOW.
7. POSITIVES: ADEQUATE FOR INTERPRETATION PURPOSES.
GP-1
BT
[redacted]
[redacted] S E C R E T

//EOM//